

IN THE CLAIMS:

Please amend the claims to read as follows:

1. (Previously presented) A process for the conversion of a substantially fluid phase substrate by heterogeneous contact of the substrate or a fragment or derivative thereof with a substantially solid phase agent wherein the solid phase agent is comprised as a surface of a support element or part thereof and the support element is adapted to rotate around an axis such that the solid phase agent provides a rotating surface or part thereof and the substrate provides a film flowing substantially radially outward from the axis in dynamic contact with the agent; characterised in that additional vibrational energy is applied to the substrate.

2. (Previously presented) A process according to claim 1, wherein the additional vibrational energy is applied to the substrate when on the rotating surface.

3. (Previously presented) A process according to claim 1, wherein the additional vibrational energy is applied to the substrate as it is being supplied to the rotating surface.

4. (Previously presented) A process according to claim 1, wherein the additional vibrational energy is applied to the substrate after it has flowed across the rotating surface.

5. (Currently Amended) ~~A process according to claim 1,~~ A process for the conversion of a substantially fluid phase substrate by heterogeneous contact of the substrate or a fragment or derivative thereof with a substantially solid phase agent wherein the solid phase agent is comprised as a surface of a support element or part thereof and the support element is adapted to rotate around an axis such that the solid phase agent provides a rotating surface or part thereof and the substrate provides a film flowing substantially radially outward from the axis in dynamic contact with the agent; characterised in that additional vibrational energy is applied to the substrate, wherein the additional vibrational energy is applied as ultrasound.

6. (Previously presented) A process according to claim 1, wherein the rotating surface is mechanically vibrated.

7. (Previously presented) A process according to claim 1, wherein the rotating surface is mounted off-centre on the axis of rotation.

8. (Previously presented) A process according to claim 1, wherein the surface is flexibly mounted on the support element.

9. (Previously presented) A process according to claim 1, wherein a mechanical vibrator is attached to the surface or the support element.

10. (Previously presented) A process according to claim 5, wherein the axis is substantially vertical with the support element adapted to rotate thereabout with the surface uppermost, and wherein ultrasound is applied to the substrate from an ultrasonic emitter located above the surface.

11. (Previously presented) A process according to claim 1, wherein the solid phase agent is in the form of a mesh, grid or corrugated surface.

12. (Previously presented) A process according to claim 1, wherein the solid phase agent comprises a nucleation or growth agent adapted for fluid phase substrate conversion by phase change to form crystals or grow seed crystals.

13. (Previously presented) A process according to claim 1, wherein the solid phase agent comprises a reagent, catalyst or initiator adapted for fluid phase substrate conversion by reaction to form products.

14. (Original) A process according to claim 13, wherein the solid phase agent is a zeolite.

15. (Previously presented) A process according to claim 13, wherein the solid phase agent is a refractory oxide.

16. (Original) A process according to claim 13, wherein the solid phase agent is a sol gel.

17. (Original) A process according to claim 13, wherein the solid phase agent is Phillips catalyst.

18. (Previously presented) A process according to claim 12, wherein the solid phase agent is sprayed onto the surface.

19. (Previously presented) A process according to claim 1, wherein additional thermal or radiation energy, including UV, IR, microwave, RF, X-ray, electric fields and magnetic fields, is applied to the substrate.

20. (Previously Presented) A process according to claim 13, wherein the solid phase agent is sprayed onto the surface.

Please add the new claims 21 and 22.

21. (New) A process according to claim 1, wherein passive vibration is induced.

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22. (New) A process according to claim 1, wherein active vibration is induced.